IN THE CLAIMS:

Claims 1, 10, 11, 14, 17, and 19-22 are proposed to be amended herein. Please cancel claims 2 and 15 without prejudice or disclaimer. New claims 27-31 are proposed to be added. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) An insulating material for a rocket ~~motor, consisting essentially of~~ motor that consists of:

a cured elastomer; ~~and~~

vapor-grown carbon fibers dispersed in the cured ~~elastomer, wherein the vapor-grown carbon fibers are present from at least 10 weight percent to not more than about 30 weight percent of a total mass of the insulating material~~ elastomer; and

at least one of a secondary polymer, a plasticizer, a tackifier, an antioxidant, a flame retardant, a processing aid, carbon black, a pigment, a bonding agent, a cure activator, a cure accelerator, a cure agent, conventional carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc.

Claim 2 (Canceled)

3. (Original) The insulating material of claim 1, wherein the vapor-grown carbon fibers have an average diameter from about 0.1 micron to about 0.8 micron.

4. (Original) The insulating material of claim 3, wherein the average diameter of the vapor-grown carbon fibers is about 0.2 micron.

5. (Original) The insulating material of claim 1, wherein the vapor-grown carbon fibers have an average length from about 50 microns to about 200 microns.

Claims 6 and 7 (Canceled)

8. (Original) The insulating material of claim 1, wherein the cured elastomer is formed from a precursor composition comprising at least one crosslinkable polymer.

9. (Previously Presented) The insulating material of claim 8, wherein the at least one crosslinkable polymer comprises between about 55 weight percent and about 70 weight percent of a total weight of the insulating material.

10. (Currently amended) The insulating material of claim 8, wherein the at least one crosslinkable polymer is selected from the group consisting of an EPDM terpolymer, polybutadiene, polyisoprene, poly(acrylonitrile-co-butadiene), ~~and~~ a precursor of natural rubber, and mixtures, combinations, copolymers, terpolymers, or blends thereof.

11. (Currently amended) The insulating material of ~~claim 8~~claim 1, wherein the ~~precursor composition further~~ cure agent comprises a sulfur-containing ~~curative~~ cure agent.

12. (Original) The insulating material of claim 1, wherein the insulating material is formulated to have a perpendicular and a parallel elongation of greater than 30%, a parallel tensile strength of greater than 1000 psi, and a tear resistance of greater than 170 pli.

13. (Original) The insulating material of claim 1, wherein the insulating material is formulated to have a volume resistivity between about 5×10^9 and 5×10^{14} Ohms·cm.

14. (Currently amended) A method for making an insulating material for a rocket motor, comprising:

providing a composition ~~consisting essentially~~ that consists of at least one crosslinkable ~~polymer and~~ polymer, vapor-grown carbon fibers, and at least one of a secondary polymer, a plasticizer, a tackifier, an antioxidant, a flame retardant, a processing aid, carbon black, a

pigment, a bonding agent, a cure activator, a cure accelerator, a cure agent, conventional carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc~~wherein the vapor-grown carbon fibers are present from at least 10 weight percent to not more than about 30 weight percent of a total mass of the insulating material~~;

dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer; and

crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material having the vapor-grown carbon fibers dispersed therein.

Claim 15 (Canceled)

16. (Original) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises dispersing vapor-grown carbon fibers having an average diameter of about 0.1 micron to about 0.8 micron in the at least one crosslinkable polymer.

17. (Currently amended) The method of claim 16, wherein dispersing ~~the~~ vapor-grown carbon fibers having ~~the~~ an average diameter of about 0.1 micron to about 0.8 micron in the at least one crosslinkable polymer comprises dispersing vapor-grown carbon fibers having an average diameter of about 0.2 micron in the at least one crosslinkable polymer.

18. (Original) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises dispersing vapor-grown carbon fibers having an average length between about 50 microns and about 200 microns in the at least one crosslinkable polymer.

19. (Currently amended) The method of claim 14, wherein ~~providing the composition comprising the at least one crosslinkable polymer and the vapor-grown carbon fibers~~ providing a composition that consists of at least one crosslinkable polymer, vapor-grown carbon fibers, and at least one of a secondary polymer, a plasticizer, a tackifier, an antioxidant, a flame retardant, a

processing aid, carbon black, a pigment, a bonding agent, a cure activator, a cure accelerator, a cure agent, conventional carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc comprises providing a composition comprising at least one crosslinkable polymer selected from the group consisting of an EPDM terpolymer, polybutadiene, polyisoprene, poly(acrylonitrile-co-butadiene), ~~and~~ a precursor of natural rubber, and mixtures, combinations, copolymers, terpolymers, or blends thereof.

20. (Currently amended) The method of claim 14, wherein ~~providing the composition comprising the at least one crosslinkable polymer and the vapor-grown carbon fibers~~ providing a composition that consists of at least one crosslinkable polymer, vapor-grown carbon fibers, and at least one of a secondary polymer, a plasticizer, a tackifier, an antioxidant, a flame retardant, a processing aid, carbon black, a pigment, a bonding agent, a cure activator, a cure accelerator, a cure agent, conventional carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc comprises providing a composition comprising the at least one crosslinkable polymer, the vapor-grown carbon fibers and a sulfur-containing ~~curative~~ cure agent.

21. (Currently amended) The method of claim 14, wherein crosslinking the at least one crosslinkable polymer to form ~~the~~ a cured elastomeric insulating material comprises crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material formulated to have a volume resistivity between about 5×10^9 and 5×10^{14} Ohms·cm.

22. (Currently amended) The method of claim 14, wherein crosslinking the at least one crosslinkable polymer to form ~~the~~ a cured elastomeric insulating material comprises crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material having a perpendicular and a parallel elongation of greater than 30%, a parallel tensile strength of greater than 1000 psi, and a tear resistance of greater than 170 pli.

23. (Original) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer is performed under substantially solvent-free

conditions.

24. (Original) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer is performed in the absence of an organic solvent.

25. (Original) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises substantially homogeneously dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer.

26. (Previously Presented) The insulating material of claim 1, wherein the vapor-grown carbon fibers have a graphitization index of from about 30 weight percent to about 65 weight percent.

27. (New) The insulating material of claim 1, wherein the vapor-grown carbon fibers comprise not more than 30 weight percent of a total weight of the insulating material.

28. (New) The insulating material of claim 1, wherein the vapor-grown carbon fibers comprise at least 10 weight percent of a total weight of the insulating material.

29. (New) The insulating material of claim 1, wherein the insulating material consists of the cured elastomer, the vapor-grown carbon fibers, a secondary polymer, a tackifier, an antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and a cure agent.

30. (New) The method of claim 14, wherein providing a composition that consists of at least one crosslinkable polymer, vapor-grown carbon fibers, and at least one of a secondary polymer, a plasticizer, a tackifier, an antioxidant, a flame retardant, a processing aid, carbon black, a pigment, a bonding agent, a cure activator, a cure accelerator, a cure agent, conventional carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc comprises providing a composition that comprises at least 10 weight percent of the

vapor-grown carbon fibers in a total weight of the cured elastomeric insulating material.

31. (New) The method of claim 14, wherein providing a composition that consists of at least one crosslinkable polymer, vapor-grown carbon fibers, and at least one of a secondary polymer, a plasticizer, a tackifier, an antioxidant, a flame retardant, a processing aid, carbon black, a pigment, a bonding agent, a cure activator, a cure accelerator, a cure agent, conventional carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc comprises providing a composition that comprises not more than 30 weight percent of the vapor-grown carbon fibers in a total weight of the cured elastomeric insulating material.